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Our calibration lab is accredited by SWEDAC



**info@elastocon / #1-2019 / Spring News**

## New software for Arrhenius plot, EC 15

After many requests from our stress relaxation customers around the world we are now happy to inform you that we can offer our newly developed software EC 15 for Arrhenius equation. It will facilitate the work with life time estimations of the material.

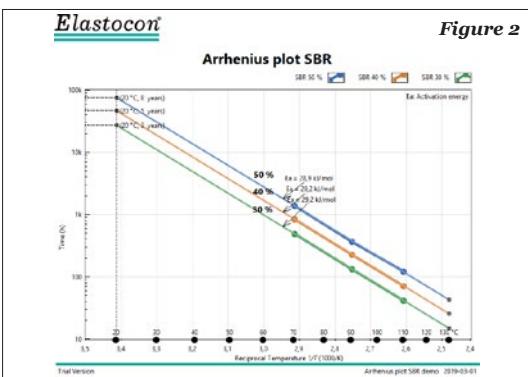
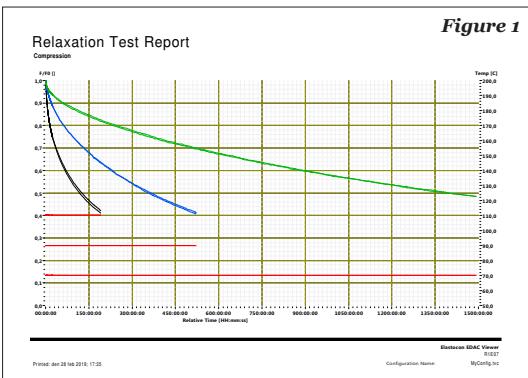
To do a life time estimation of e.g. rubber material you could perform a stress relaxation test at three different temperatures until you reach the status where your material is considered to be "dead" (often is 50% relaxation used for this).

After this you plot the values in our new software and will get a graph where you can estimate the life length of your material at different temperatures. Easy, smooth and requires minimum of manual work. Doesn't this sound great?

Do you want to know more? Please contact us and we will be happy to help you.

**Figure 1:** SBR relaxation curves at three temperatures.

**Figure 2:** Arrhenius plot at 30 %, 40 % and 50 % relaxation.



**Elastocon manufactures instruments for testing of rubber and plastic materials**

- Specimen preparation
- Ageing ovens
- Stress relaxation and creep
- Low temperature testing
- Windscreen fogging
- Computerised testing
- Electrical tests
- Custom built instruments
- Calibration service

# Improved accuracy for Elastocon's compression stress relaxation rigs

We are improving the accuracy for our compression stress relaxation rigs. Measurements in our laboratory has showed that the accuracy can be further improved with an adjustment of the load cells measuring range.

Therefore we'll recommend different sizes of load cells depending on your materials hardness.

- For Shore A up to 80° we recommend the default load cell of 600 N (samples ø 13 mm).
- For Shore A up to 90° we recommend a load cell of 1200 N (samples ø 13 mm).
- For bigger samples or harder samples from products we recommend a load cell of 2000 N.

Please note that from 2019 our default load cell will be 600 N unless otherwise specified on your order and our order confirmation.

Using larger load cells than required by the measurement will give you less accurate results than one that is best ranged to suit your materials.

If you have different type of materials and need different sizes of load cells, we recommend that you order extra load cells that you can change between, depending on each separate test.

Please, don't hesitate to contact us if you have any questions!



## New employee

During the autumn of 2018, Elastocon expanded its workforce with a software developer.

**Thomas Olsson** is a systems architect and develops Elastocon's software, both those that

accompany the instruments and stand alone. He has extensive experience in the development of measurement technology programs and production testing of electronics, and has worked in industries such as defense, medical technology, telecom and manufacturing.



# Installations of a Stress Relaxation System in Sweden

In beginning of February, I had the privilege to go to Nolato Silikonteknik in Sweden for installation of their newly purchased stress relaxation system.

It felt special to me since I'm not really used to handle installation in the Nordic countries and not in Swedish.

I was very well received, and the customer seem to be very well prepared to get a good use of their investment.

Anna Anderzén



The Relaxation system for continuous measurement of rubber in either compression or tension. It meets the requirements in ISO 3384, ISO 6914 and ASTM D6147.

# Installations of a Test Tube Oven EB 11-II in Czech Republic

In October 2018 I visited a customer outside of Prague and helped them install their newly purchased ageing oven EB 11-II.

The facilities were still going through some construction even if the laboratory seemed finished, they had builders working hard both inside and outside to finalize the buildings.

The installation went well, and I hope they have good use of their oven and now I believe their facility is finalized and I'm sure it is great.

Anna Anderzén



The EB 11-II has 24 test tubes and one temperature. It is used for ageing tests according to ASTM D865 Rubber-Deterioration by Heating in Air (Test Tube Enclosure). The oven can also be used for testing in liquids according to ASTM D471 and ISO 1817 Effect of liquids.

# Training in rubber testing

During 3 days in March we had the privilege to welcome the students who are attending the higher rubber technical educations (called for UKG and TSGF) this year, for a couple of intensive days.

The days were filled with theory combined with practical hands on training in the laboratory. The 19 participants were divided into 4 groups, and each group got a material to investigate and figure out which polymer it was.

This was done by practical testing of e.g. sample preparation, extraction, ageing, stress relaxation, low temperature tests (both TR-test and Low Temperature Compression Set), tensile tests, volume change, TGA etc.



They were also given an additional task to solve during these days. All groups got a product that they should determine a suitable testing schedule for, depending on the product's usage. All groups solved their tasks very well.

Elastocon's staff think it is very nice to arrange this training. The students interest and knowledge inspires us too, during these days.

Anna Anderzén

## Representative training at Elastocon

At the end of March, we had a training session for three of the companies representing Elastocon in Poland, Spain and the United States.

The image shows a dinner that took place at Glaset Hus in Limmared with participants from Elastocon, Polish ToRoPoL, Spanish Grupo ADI and American RT Instruments. A demonstration of glass blowing was given prior to the dinner.



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